

### REMARKS

Applicants respectfully request entry of this amendment under 37 C.F.R. § 1.116, placing the pending claims in condition for allowance. Claims 1, 4, 7, 10, 13, 16, 19, 20, 34-38, 64, 65, 68, 71, 77, 80, 83, and 89-159 will be pending upon entry of the present amendment. Claims 21, 23, 28-30, 66, 67, 69, 70, 72-76, 78, 79, 81, 82, and 84-88 have been cancelled herein without prejudice or disclaimer. Applicants reserve the right to pursue claims to the cancelled subject matter in one or more divisional applications. Claims 1, 4, 7, 10, 13, 16, 19, 20, 64, 65, 68, 71, 77, 80, 83, 103 and 104 have been amended. In addition, new claims 132-159 were added.

Support for the new and amended claims can be found throughout the specification as filed. Support for the functional feature "...wherein said polynucleotide encodes a polypeptide which binds Fas ligand....," is found, for example, in the instant specification at paragraphs [0731] and [0733]. In particular, the instant application discloses that soluble TR13 proteins may competitively bind to TNF-family ligands, which include Fas ligand. Support for Fas ligand binding is also found in the earliest filed priority document, U.S. Provisional Application No. 60/144,087, filed July 16, 1999, on page 129, lines 25-31, and page 130, lines 1-15. Support for new claims 132-159 is found throughout the specification as filed, for example at paragraphs [39], [0139] to [0140], [162] to [172], [175], and [212] to [223]. Accordingly, these amendments add no new matter. Applicants further submit that the entry of the amendments would place the application in better form for appeal should the Office dispute the patentability of the pending claims.

The Examiner has denied the instant application the benefit of its earliest claimed priority document, U.S. Provisional Application No. 60/144,087 (the '087 application), filed July 16, 1999, alleging that the instant application is entitled to priority only as of its filing date of January 16, 2002. However, as discussed with the Examiner by telephone, the instant application claims the benefit of five additional priority applications which have not been addressed by the Examiner in the priority determination. As detailed in section II below, the disclosures of these earlier applications are material to the determination of priority in the instant application. Thus, Applicants respectfully request that the finality of the instant rejection be withdrawn so that the earlier disclosures can be considered, and Applicants may respond to any issues raised by the Examiner.

## **I. Claim Rejections under 35 U.S.C. § 112**

Claims 1, 20, 21, 23, 28-30, 34-38, 64, 65, 68, 71, 74-77, 80, 83, 86-105, 107, 109, 111, 113, 115 and 117-130 are rejected under 35 U.S.C. 112, first paragraph as allegedly lacking written description, "for reasons of record." See page 3, lines 7-12 of the instant Office Action. More specifically, in a prior Office Action (Paper No. 8), the Examiner alleged that:

"nucleic acid molecules that do not encode the extracellular domain, or encode a polypeptide 95% identical to the extracellular domain or truncated versions of it . . . do not have adequate written description, since this region is more likely than not to be critical for Fas ligand binding. The claims encompass a broader genus than the Applicants have defined."

See Paper No. 8, page 11, lines 5-13.

Applicants respectfully disagree, for reasons set forth in detail in the response filed August 19, 2003 (see, e.g., pages 93-97). However, claims 21, 23, 28-30, 74-76, and 86-88 have been canceled, and claims 1, 20, 64, 65, 68, 71, 77, 80, 83, 103, and 104 have been amended. Applicants reserve the right to pursue canceled subject matter in future continuing applications.

More specifically, in claims 1 and 64, the phrase "...at least 95% identical to a sequence..." was removed. In addition, parts (g), (h), and (i) were deleted from claim 1, and parts (d) and (h) were deleted from claims 64 and 103. Claims 104, drawn to polynucleotides encoding polypeptides at least 95% identical to the TR13 polypeptide encoded by ATCC Deposit No. PTA-507, was amended to recite, "wherein said polynucleotide encodes a polypeptide which binds Fas ligand." New claims 132 and 145 also recite "wherein said polynucleotide encodes a polypeptide which binds Fas ligand."

In view of these amendments, Applicants submit that the pending claims are adequately described in the specification, and respectfully request that the instant rejection be reconsidered and withdrawn.

## **II. Priority**

The Examiner maintains that the the teaching of U.S. Provisional Application No. 60/144,087 (the '087 application), filed July 16, 1999, does not support the present application, and further alleges that the effective priority date of the instant application is its

filing date, January 16, 2002. Applicants respectfully disagree and traverse the Examiner's priority determination.

Contrary to the Examiner's assertions, the '087 application clearly and fully describes the function of TR13 of the present invention. In particular, the '087 application teaches that TR13, as encoded by the cDNA contained within ATCC Deposit No. PTA-507, is a novel member of the Tumor Necrosis Factor Receptor family of polypeptides, that it is involved in the regulation of apoptosis, and that it is expressed in a number of tissue and cell types and specifically that it is found in resting and activated T-cells as well as apoptotic T-cells. *See e.g.*, '087 application, at page 1, lines 5-10 and 20-24; at page 105, lines 23-35; and at page 152, lines 26-30. The '087 application further provides compositions and methods of enhancing and inhibiting apoptosis, and teaches how these compositions and methods may be useful in the treatment of specific diseases including, for example, HIV infection and AIDS. *See e.g.*, '087 application at page 5, lines 10-11 and 20-21; at page 109, lines 20-23; and at page 111, lines 9-23. The '087 application further teaches that the compositions useful in enhancing and inhibiting apoptosis can be readily identified using techniques well known to one of skill in the art, and specifically states that "TR13 functional receptor activity can be measured using the cell death assays performed essentially as previously described ... [n]uclei of cells transfected with TR13 will exhibit apoptotic morphology." *See* '087 application at page 47, lines 21-28. Accordingly, Applicants assert that the '087 application clearly sets forth specific and substantial utilities of TR13 of the invention, and that one of skill in the art, on being apprised of the teachings of the '087 application, would have found these asserted utilities to be credible.

The Examiner alleges that the disclosure of the '087 priority application contradicts the teachings of the instant application, stating:

the present application teaches that administering an agonist (ligand) to a cell expressing the TR13 [receptor] causes apoptosis, and does not inhibit it, as taught in the '087 application, so that the present application is not supported by the teachings of the '087 application.

Page 5, lines 21-23 of the present Office Action. Applicants note that the Examiner has not commented on the 5 other related applications: U.S. Provisional Application Nos. 60/148,450 (filed August 18, 1999), 60/149,712 (filed August 20, 1999), 60/153,089 (filed September 10, 1999), and 60/261,960 (filed January 17, 2001); as well as U.S. Non-Provisional Application

No. 09/618,570 (filed July 14, 2000). The instant application claims priority to each of these prior applications, in addition to the '087 application cited by the Examiner.

Applicants submit that the allegedly contradictory statements concerning the role of TR13 antagonists and agonists in apoptosis are not found in later-filed priority applications. For example, the '089 specification discloses:

Thus, the invention further provides a method for inhibiting TR13 mediated signaling and/or apoptosis induced by a TNF-family ligand, which involves administering to a cell which expresses the TR13 polypeptide (i.e., the TR13 polypeptide shown in Figures 1A-C and/or Figures 7A-D, or a fragment thereof) an effective amount of a TR13 antagonist capable of decreasing TR13 mediated apoptosis and/or decreasing TR13 mediated signaling. Preferably, TR13 mediated signaling is decreased to treat a disease wherein increased apoptosis is exhibited.

Thus, the invention further provides a method for promoting TR13 mediated signalling and/or apoptosis induced by a TNF-family ligand, which involves administering to a cell which expresses the TR13 polypeptide (e.g., the TR13 polypeptide shown in Figures 1A-C and/or Figures 7A-D, or a fragment thereof) an effective amount of a TR13 agonist capable of increasing TR13 mediated apoptosis and/or increasing TR13 mediated signaling. Preferably, TR13 mediated signaling is increased to treat a disease wherein decreased apoptosis is exhibited.

U.S. Provisional Application No. 60/153,089 at page 5, line 33 through page 6, line 9; emphasis added. The same disclosure can be found in U.S. Application Serial No. 09/618,570 (filed July 14, 2000) at page 6, lines 9-22, and U.S. Provisional Application No. 60/261,960 (filed January 17, 2001) at page 7, lines 3-16. Therefore, in the event that the Examiner refuses to grant the earliest priority date of July 16, 1999, the instant application should in the very least be accorded the priority of the filing date of U.S. Provisional Application No. 60/153,089, which is September 10, 1999. Furthermore, Applicants again request that the finality of the instant Office Action be withdrawn so that a thorough review of the priority documents can be performed, and Applicants may be given an opportunity to respond to any new issues raised by the Examiner.

### **III. Rejections Under 35 U.S.C. § 102**

A. The Examiner has rejected claims 1, 4, 7, 10, 13, 16, 19-21, 23, 29-30, 34-38, 64, Application No. 10/046,433

65, 68, 71, 74, 75, 77, 80, 83, 86-96, 98-105, 107, 109, 111, 113, 115, 117-124 and 126-130 under 35 U.S.C. § 102(b) as allegedly anticipated by Bruck et al., WO 00/58460. *See* Page 6, lines 4-6 of the present office action.

Applicants respectfully traverse the rejection. As discussed above, the instant application is entitled to an effective priority date of July 16, 1999 (the '087 filing date), and at the very latest, September 10, 1999 (the '089 filing date). Therefore, the teachings of Bruck et al., being published as a reference on October 5, 2000, do not qualify as prior art against the present application under 35 U.S.C. § 102. Accordingly, Applicants respectfully request that the present rejection under 35 U.S.C. § 102(b) be reconsidered and withdrawn.

B. The Examiner has rejected claims 1, 4, 7, 10, 13, 16, 19-21, 23, 28-30, 34-38 and 64-131 under 35 U.S.C. § 102(a) as allegedly anticipated by Ruben et al., WO 01/05834. *See* Page 6, lines 7-8 of the present office action.

Applicants respectfully traverse the rejection. As discussed above, the instant application is entitled to an effective priority date of July 16, 1999 (the '087 filing date), and at the very latest, September 10, 1999 (the '089 filing date). Therefore, the teachings of Ruben et al., being published as a reference on January 25, 2001, do not qualify as prior art against the present application under 35 U.S.C. § 102. Accordingly, Applicants respectfully request that the present rejection under 35 U.S.C. § 102(a) be reconsidered and withdrawn.

C. The Examiner has rejected claims 97 and 125 under 35 U.S.C. § 103(a) as allegedly unpatentable over Bruck et al., WO 00/58460, in view of Fleer et al., US 5,876,969. *See* Page 6, lines 9-10 the present office action.


Applicants respectfully traverse the rejection. As discussed above, the instant application is entitled to an effective priority date of July 16, 1999 (the '087 filing date), and at the very latest, September 10, 1999 (the '089 filing date). Therefore, the teachings of Bruck et al., being published as a reference on October 5, 2000, do not qualify as prior art against the present application under 35 U.S.C. § 103. Furthermore, US 5,876,969 fails to disclose the TR13 molecules of the instant invention, and therefore does not itself support a rejection under 35 U.S.C. § 103. Accordingly, Applicants respectfully request that the present rejection under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

### Conclusion

Applicants respectfully request that the above-made remarks be entered and made of record in the file history of the instant application. In view of the foregoing remarks, applicants believe that this application is now in condition for allowance. An early notice to that effect is urged. The Examiner is invited to call the undersigned at the phone number provided below if any further action by Applicants would expedite the allowance of this application. Finally, if there are any fees due in connection with the filing of this paper, please charge the fees to our Deposit Account No. 08-3425. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

Dated: February 4, 2004

  
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